REMARKS

This Office Action Response is submitted in response to the outstanding non-final Office Action, dated July 11, 2006. Claims 1-3, 17-19, 23-25 and 29 are presently pending in the above-identified patent application. Claims 1-3, 17-19 and 23-25 are herein proposed to be amended. Support for the amendments can be found, for example, on page 23, lines 16-22; page 4, lines 21-22; page 4, line 24 through page 5, line 2; page 6, lines 25-26; page 9, lines 16-21; page 11, lines 22-24; page 14, lines 9-17; and page 21, lines 13-14.

In the outstanding Office Action, the Examiner rejected claims 1-3 and 29 under 35 U.S.C. §101 as allegedly being directed to non-statutory subject matter. Also, the Examiner rejected claims 1-3, 17-19, 23-25 and 29 under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the enablement requirement.

The comments of the Examiner in forming the objection and rejections are acknowledged and have been carefully considered.

FORMAL REJECTIONS

As mentioned above, the Examiner rejected claims 1-3 and 29 under 35 U.S.C. §101 as allegedly being directed to non-statutory subject matter. On page 2 of the Office Action, the Examiner states that

> [t]he method comprises steps which are equivalent to a process of mathematical operations and therefore, does not constitute a statutory process (see Benson, 409 U.S. at 71-72, 175 USPQ at 676).

Applicants respectfully assert the amendments to claims 1-3 overcome the rejection. For such subject matter to be statutory, the claimed process must be limited to a practical application of the abstract idea or mathematical algorithm in the technological arts. See *Alappat*, 33 F.3d at 1543, 31 USPQ2d at 1556-57 (quoting *Diamond v. Diehr*, 450 U.S. at 192, 209 USPQ at 10). A claim is limited to a practical application when the method, as claimed, produces a concrete, tangible and useful result; i.e., the method recites a step or act of producing something that is

concrete, tangible and useful. See *AT&T*, 172 F.3d at 1358, 50 USPQ2d at 1452. For example, a computer process that simply calculates a mathematical algorithm that models noise is nonstatutory. However, a claimed process for digitally filtering noise employing the mathematical algorithm is statutory. MPEP §2106 IV(b)(2)(b).

5   Applicants submit that the amended claims are limited to a practical application because they produce the concrete, tangible and useful result of characterizing gene expression of an unknown sample by comparing gene expression patterns of the unknown sample with gene expression patterns also produced by the claimed invention. As stated in the specification on page 30, lines 16-21, "The present invention has better predictive power than other methods,"

10   and use of the claimed invention "is highly desirable for discovering mechanism for various diseases at the molecular level."

Also, the Examiner rejected claims 1-3, 17-19, 23-25 and 29 under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the enablement requirement. On page 5 of the

15   Office Action, the Examiner asserts that the "specification does not teach how to derive a transformation that transforms gene expression signals."

Applicants respectfully assert that the amendments to claims 1-3, 17-19 and 23-25 overcome the rejection. Applicants submit that the specification sufficiently enables the claim limitations of the amended claims. As means of example only, such enabling language can be

20   found on page 23, lines 16-22; page 4, lines 21-22; page 4, line 24 through page 5, line 2; page 6, lines 25-26; page 9, lines 16-21; page 11, lines 22-24; page 14, lines 9-17; and page 21, lines 13-14.

Given the above remarks, Applicants respectfully request reconsideration and withdrawal

25   of the rejections of claims 1-3, 17-19, 23-25 and 29 under 35 U.S.C. §112, first paragraph.

In view of the foregoing, Applicants submit that all of the pending claims, i.e., claims 1-3, 17-19, 23-25 and 29, are in condition for allowance and such favorable action is earnestly solicited.

If any outstanding issues remain, or if the Examiner has any further suggestions for

expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

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Respectfully submitted,

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